

WHAT IS CLAIMED IS:

- Sub A1* ~~1.~~ Process for the preparation of an impact-resistant polymer composition comprising a rubber composition dispersed in a matrix polymer, said process comprising melt mixing matrix polymer A with said rubber composition dispersed in a matrix polymer B, wherein the dispersion of said rubber composition in matrix polymer B is the product obtained by melt mixing of matrix polymer B with a rubber composition that contains at least one functionalized rubber, and at least one non-functionalized rubber and wherein said impact-resistant rubber composition comprises 0.5-75 parts by weight of rubber composition per 100 parts by weight of matrix polymer.
- Sub A2* ~~2.~~ Process according to claim 1, wherein matrix polymer B is identical to matrix polymer A.
- ~~3.~~ Process according to claim 1, wherein the weight ratio of matrix B to rubber composition lies between 80:20 and 30:70.
- ~~4.~~ Process according to claim 3, wherein the functionalized rubber is present as a shell around a core of the non-functionalized rubber.
- ~~5.~~ Process according to claim 1, wherein the functionalized rubber is derived from a rubber that is different from the non-functionalized rubber.
- ~~6.~~ Process according to claim 3, wherein the non-functionalized rubber is an ethylene (C4-C12)  $\alpha$ -olefin copolymer rubber.
- ~~7.~~ Process according to claim 6, wherein the ethylene-  $\alpha$ -olefin copolymer is obtained by polymerization in the presence of a metallocene catalyst.
- ~~8.~~ Process according to claim 1, wherein the matrix polymers A and B are selected from the group consisting of polyamides, polyesters, polyacetals and polycarbonates.
- ~~9.~~ Process according to claim 8, wherein the matrix polymers are each polyamides.

*Sub A3*

10. Process according to claim 1, wherein the functionalized rubber comprises a styrene-butadiene tri-block polymer.

11. Process according to claim 1, wherein the functionalized rubbers are obtained by reaction with or by graft polymerization of a rubber with an unsaturated dicarboxylic acid anhydride, an unsaturated dicarboxylic acid or an unsaturated dicarboxylic acid ester.

12. Process according to claim 1, wherein the rubber is not crosslinked.

*Sub A4*

13. A composition comprising a dispersed rubber composition in a first matrix polymer, the dispersed rubber composition containing at least one functionalized rubber and at least one non-functionalized rubber, whereby said composition may be mixed with a composition comprising a second matrix polymer to form an impact-resistant polymer composition.

14. Impact-resistant polymer composition obtainable by the process according to claim 1.

*Sub A5*

15. Granule mixture comprising a matrix polymer A and a matrix polymer B in which a rubber composition is dispersed wherein the rubber composition contains at least one functionalized rubber and at least one non-functionalized rubber.

16. Granule mixture according to claim 16, wherein the matrix polymer B is identical to matrix polymer A.

17. Granule mixture according to claim 16, wherein the rubber composition is dispersed in a matrix polymer B and the functionalized rubber is present as a shell around the core of the non-functionalized rubber.

18. Granule mixture according to claim 16, wherein the functionalized rubber and/or the non-functionalized rubber comprises ethylene- $\alpha$ -olefin copolymer obtained by polymerization in the presence of a metallocene catalyst.

19. Granule mixture according to claim 16, wherein the functionalized rubber and/or the non-functionalized rubber comprises a styrene-butadiene tri-block copolymer.

Rule 1.12 & Sub R3  
cont.

21. Object shaped from the melt of the granule mixture according to claim 16.
22. Object according to claim 21, wherein the functionalized rubber is present as a shell around a core of non-functionalized rubber.

Add A6